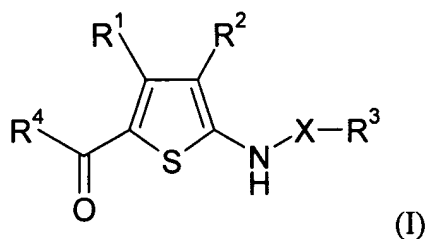


## CLAIM AMENDMENTS

1-80. (canceled)

81. (new) A method for the prophylaxis or treatment of a disease state or condition mediated by a p38 MAP kinase, which method comprises administering to a subject in need thereof a therapeutically effective amount of a compound of the formula (I):



or a salt, solvate or N-oxide thereof, wherein:

R<sup>1</sup> and R<sup>2</sup> are the same or different and each is selected from hydrogen, C<sub>1-4</sub> hydrocarbyl, halogen and cyano;

X is selected from C=O, C=S, C(=O)NH, C(=S)NH, C(=O)O, C(=O)S, C(=S)O and C(=S)S;

R<sup>3</sup> is selected from aryl and heteroaryl groups each having from 5 to 12 ring members, the aryl and heteroaryl groups each being unsubstituted or substituted by one or more substituent groups R<sup>7</sup>;

R<sup>7</sup> is selected from halogen, hydroxy, trifluoromethyl, cyano, nitro, carboxy, amino, carbocyclic and heterocyclic groups having from 3 to 12 ring members; a group R<sup>a</sup>-R<sup>b</sup> wherein R<sup>a</sup> is a bond, O, CO, X<sup>1</sup>C(X<sup>2</sup>), C(X<sup>2</sup>)X<sup>1</sup>, X<sup>1</sup>C(X<sup>2</sup>)X<sup>1</sup>, S, SO, SO<sub>2</sub>, NR<sup>c</sup>, SO<sub>2</sub>NR<sup>c</sup> or NR<sup>c</sup>SO<sub>2</sub>; and R<sup>b</sup> is selected from hydrogen, carbocyclic and heterocyclic groups having from 3 to 7 ring members, and a C<sub>1-8</sub> hydrocarbyl group optionally substituted by one or more substituents selected from hydroxy, oxo, halogen, cyano, nitro, amino, mono- or di-C<sub>1-4</sub> hydrocarbylamino, carbocyclic and heterocyclic groups having from 3 to 12 ring members and wherein one or more carbon atoms of

the C<sub>1-8</sub> hydrocarbyl group may optionally be replaced by O, S, SO, SO<sub>2</sub>, NR<sup>c</sup>, X<sup>1</sup>C(X<sup>2</sup>), C(X<sup>2</sup>)X<sup>1</sup> or X<sup>1</sup>C(X<sup>2</sup>)X<sup>1</sup>;

X<sup>1</sup> is O, S or NR<sup>c</sup> and X<sup>2</sup> is =O, =S or =NR<sup>c</sup>;

R<sup>c</sup> is hydrogen or C<sub>1-4</sub> hydrocarbyl;

R<sup>4</sup> is a group YR<sup>5</sup> or a group R<sup>6</sup>;

Y is NH, O or S;

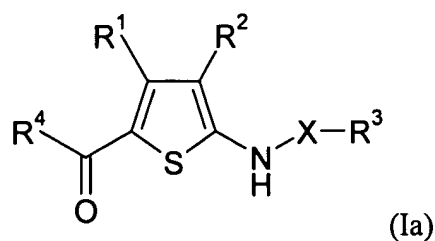
R<sup>5</sup> is selected from (a) carbocyclic and heterocyclic groups having from 3 to 12 ring members; and (b) C<sub>1-8</sub> hydrocarbyl groups optionally substituted by one or more substituents selected from hydroxy, oxo, halogen, cyano, amino, mono- or di-C<sub>1-4</sub> hydrocarbylamino, and carbocyclic and heterocyclic groups having from 3 to 12 ring members, wherein one or more carbon atoms of the C<sub>1-8</sub> hydrocarbyl group may optionally be replaced by O, S, SO, SO<sub>2</sub>, NR<sup>c</sup>, X<sup>1</sup>C(X<sup>2</sup>), C(X<sup>2</sup>)X<sup>1</sup> or X<sup>1</sup>C(X<sup>2</sup>)X<sup>1</sup>, provided that when Y is O, a carbon atom adjacent to the group Y is not replaced by O; and

R<sup>6</sup> is a heterocyclic group having from 4 to 12 ring members and containing at least one ring nitrogen atom through which R<sup>6</sup> is linked to the adjacent carbonyl group;

wherein the carbocyclic and heterocyclic groups of substituents R<sup>5</sup> and R<sup>6</sup> are each unsubstituted or substituted by one or more substituent groups R<sup>7</sup> as hereinbefore defined.

82. A method according to claim 81 wherein the disease state or condition is selected from inflammatory and arthritic diseases and conditions.

83. A compound of the formula (Ia):



or a salt, solvate or N-oxide thereof, wherein:

$R^1$  and  $R^2$  are the same or different and each is selected from hydrogen,  $C_{1-4}$  hydrocarbyl, halogen and cyano;

X is selected from C=O, C=S, C(=O)NH, C(=S)NH, C(=O)O, C(=O)S, C(=S)O and C(=S)S;

$R^3$  is selected from aryl and heteroaryl groups each having from 5 to 12 ring members, the aryl and heteroaryl groups each being unsubstituted or substituted by one or more substituent groups  $R^7$ ;

$R^7$  is selected from halogen, hydroxy, trifluoromethyl, cyano, nitro, carboxy, amino, carbocyclic and heterocyclic groups having from 3 to 12 ring members; a group  $R^a-R^b$  wherein  $R^a$  is a bond, O, CO,  $X^1C(X^2)$ ,  $C(X^2)X^1$ ,  $X^1C(X^2)X^1$ , S, SO,  $SO_2$ ,  $NR^c$ ,  $SO_2NR^c$  or  $NR^cSO_2$ ; and  $R^b$  is selected from hydrogen, carbocyclic and heterocyclic groups having from 3 to 12 ring members, and a  $C_{1-8}$  hydrocarbyl group optionally substituted by one or more substituents selected from hydroxy, oxo, halogen, cyano, nitro, amino, mono- or di- $C_{1-4}$  hydrocarbylamino, carbocyclic and heterocyclic groups having from 3 to 12 ring members and wherein one or more carbon atoms of the  $C_{1-8}$  hydrocarbyl group may optionally be replaced by O, S, SO,  $SO_2$ ,  $NR^c$ ,  $X^1C(X^2)$ ,  $C(X^2)X^1$  or  $X^1C(X^2)X^1$ ;

$X^1$  is O, S or  $NR^c$  and  $X^2$  is =O, =S or = $NR^c$ ;

$R^c$  is hydrogen or  $C_{1-4}$  hydrocarbyl;

$R^4$  is a group  $YR^5$  or a group  $R^6$ ;

Y is NH, O or S;

$R^5$  is selected from (a) carbocyclic and heterocyclic groups having from 3 to 12 ring members; and (b)  $C_{1-8}$  hydrocarbyl groups optionally substituted by one or more substituents selected from hydroxy, oxo, halogen, cyano, amino, mono- or di- $C_{1-4}$  hydrocarbylamino, and carbocyclic and heterocyclic groups having from 3 to 12 ring members, wherein one or more carbon atoms of the  $C_{1-8}$  hydrocarbyl group may optionally be replaced by O, S, SO,  $SO_2$ ,  $NR^c$ ,  $X^1C(X^2)$ ,  $C(X^2)X^1$  or  $X^1C(X^2)X^1$ , provided that when Y is O, a carbon atom adjacent to the group Y is not replaced by O; and

$R^6$  is a heterocyclic group having from 4 to 12 ring members and containing at least one

ring nitrogen atom through which R<sup>6</sup> is linked to the adjacent carbonyl group, provided that R<sup>6</sup> is other than a bicyclic group comprising a benzene ring fused to a 7-membered heterocyclic ring;

wherein the carbocyclic and heterocyclic groups of substituents R<sup>5</sup> and R<sup>6</sup> are each unsubstituted or substituted by one or more substituent groups R<sup>7</sup> as hereinbefore defined; provided that:

(a) when X is C=O and R<sup>3</sup> is a heteroaryl group substituted by the group R<sup>a</sup>-R<sup>b</sup> where R<sup>a</sup> is NR<sup>c</sup>C=O, then R<sup>b</sup> is other than an optionally further substituted phenyl, pyridyl or pyrimidinyl group having a carbocyclic or heterocyclic group bonded to the *ortho* position thereof either directly or through an intervening linker atom or group of 1 or 2 atoms in length;

(b) when X is C=O, R<sup>3</sup> is other than:

(i) an optionally further substituted phenyl, pyridyl or pyrimidinyl group having a carbocyclic or heterocyclic group bonded to the *ortho* position thereof either directly or through an intervening linker atom or group of 1 or 2 atoms in length;

(ii) a phenyl group having an oxy-substituent bonded to the *ortho* position thereof;

(iii) an optionally N-substituted pyrrolidine ring substituted on a carbon atom thereof by a group selected from thiol, substituted thiol, thiocarbonate and groups containing a  $\beta$ -lactam ring;

(c) when X is C=O and R<sup>3</sup> is an unsubstituted phenyl group, or a phenyl group substituted by one or more substituents, none of which are cyclic, then R<sup>4</sup> is other than alkoxy;

(d) when X is C(=O)NH and R<sup>3</sup> is a thiophene group bearing a 5-alkoxycarbonyl group, then R<sup>4</sup> is other than alkoxy;

(e) when Y is NH or O and R<sup>5</sup> is a C<sub>2-4</sub> alkylene group bearing a terminal amino, monoalkylamino or dialkylamino substituent, wherein the alkyl moieties of the mono- and dialkylamino substituents are themselves unsubstituted or further substituted; then X-R<sup>3</sup> is other than an unsubstituted or substituted benzoyl group;

(f) when Y is NH and R<sup>5</sup> is a C<sub>1-3</sub> alkylene group bearing a terminal carboxy or alkoxycarbonyl substituent; then X-R<sup>3</sup> is other than a 4- carbamimidoyl-benzoyl group;

(g) when X is C=O, Y is NH and R<sup>5</sup> is a 3-dimethylaminoprop-1-yl group; then R<sup>3</sup> is other than a 5-nitro-2-thiophenyl group; and

(h) when X is C=O, R<sup>4</sup> is ethoxy, R<sup>1</sup> is methyl and R<sup>2</sup> is hydrogen or cyano; then R<sup>3</sup> is other than an unsubstituted phenyl group.

84. A compound according to claim 83 wherein X is selected from C=O and C(=O)NH.

85. A compound according to claim 84 wherein R<sup>3</sup> is a monocyclic aryl or heteroaryl group, which monocyclic aryl or heteroaryl group is unsubstituted or substituted by one or more substituent groups R<sup>7</sup>.

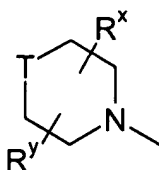
86. A compound according to claim 85 wherein the monocyclic aryl and heteroaryl group is selected from phenyl, pyrazolyl, and thiadiazolyl groups, wherein the phenyl, pyrazolyl, and thiadiazolyl groups are each unsubstituted or substituted by one or more substituent groups R<sup>7</sup>.

87. A compound according to claim 86 wherein the monocyclic aryl group or heteroaryl group R<sup>3</sup> contains one or more substituent groups R<sup>7</sup> selected from halogen, carbocyclic and heterocyclic groups having from 4 to 7 ring members and optionally substituted C<sub>1-8</sub> hydrocarbonyl groups.

88. A compound according to claim 87 wherein one of said one or more substituent groups R<sup>7</sup> is a carbocyclic or heterocyclic group which is linked to the aryl or heteroaryl ring via a carbon nitrogen bond.

89. A compound according to claim 88 in which R<sup>4</sup> is a group R<sup>6</sup> wherein R<sup>6</sup> is a monocyclic group having from 4 to 7 ring members.

90. A compound according to claim 89 wherein the monocyclic group R<sup>6</sup> is a group:



where T is N-methyl or O; R<sup>x</sup> and R<sup>y</sup> are the same or different and are selected from hydrogen and methyl; or one of R<sup>x</sup> and R<sup>y</sup> is selected from hydroxymethyl and ethyl and the other is hydrogen.

91. A compound according to claim 90 wherein T is O and R<sup>x</sup> and R<sup>y</sup> are both hydrogen.

92. A compound according to claim 91 containing a combination of groups R<sup>1</sup> and R<sup>2</sup> selected from: (a) R<sup>1</sup> = chlorine and R<sup>2</sup> = methyl; (b) R<sup>1</sup> = chlorine and R<sup>2</sup> = hydrogen; (c) R<sup>1</sup> = hydrogen and R<sup>2</sup> = hydrogen; (d) R<sup>1</sup> = methyl and R<sup>2</sup> = hydrogen; (e) R<sup>1</sup> = cyano and R<sup>2</sup> = methyl; and (f) R<sup>1</sup> = methyl and R<sup>2</sup> = cyano.

93. A compound according to claim 92 wherein the combination of groups R<sup>1</sup> and R<sup>2</sup> is combination (a).

94. A compound according to claim 92 wherein X is C=O.

95. A compound according to claim 94 wherein R<sup>3</sup> is a phenyl group bearing one or two *meta* substituents.

96. A compound according to claim 95 wherein one *meta* position on the phenyl ring is unsubstituted or is substituted by a group selected from fluorine, chlorine, methoxy, trifluoromethoxy, trifluoromethyl, ethyl, methyl and isopropyl; and the other *meta* position is substituted by a group selected from fluorine, chlorine, methoxy, trifluoromethoxy, trifluoromethyl, ethyl, methyl, isopropyl, isobutyl, t-butyl, phenyl, substituted phenyl, and five and six membered monocyclic heterocyclic groups.

97. A compound according to claim 96 wherein both *meta* positions on the phenyl ring are substituted, one substituent being a halogen and the other substituent being a morpholine group.

98. A compound according to claim 92 wherein X is C(=O)NH.

99. A compound according to claim 98 wherein R<sup>3</sup> is a pyrazole group substituted by two

substituent groups R<sup>7</sup>.

100. A compound according to claim 99 wherein the two substituent groups R<sup>7</sup> are located on non-adjacent ring members.

101. A compound according to claim 100 wherein the pyrazole group is substituted by an optionally substituted phenyl group and a C<sub>1-4</sub> hydrocarbyl group.

102. A compound according to claim 101 wherein the optionally substituted phenyl group is 4-fluorophenyl.

103. A compound according to claim 101 wherein the C<sub>1-4</sub> hydrocarbyl group is *tert*-butyl.

104. A compound according to claim 83 selected from:

3-chloro-5-(3-fluoro-5-morpholin-4-yl-benzoylamino)-4-methyl-thiophene-2-carboxylic acid methyl ester;

N-[4-chloro-3-methyl-5-(morpholine-4-carbonyl)-thiophen-2-yl]-3-fluoro-5-morpholin-4-yl-benzamide;

5-{3-[5-*tert*-butyl-2-(4-fluoro-phenyl)-2H-pyrazol-3-yl]-ureido}-3-chloro-4-methyl-thiophene-2-carboxylic acid methyl ester;

1-[5-*tert*-butyl-2-(4-fluoro-phenyl)-2H-pyrazol-3-yl]-3-[4-chloro-3-methyl-5-(morpholine-4-carbonyl)-thiophen-2-yl]-urea;

5-(3-fluoro-5-morpholin-4-yl-benzoylamino)-3-methyl-thiophene-2-carboxylic acid ethyl ester;

3-fluoro-N-[4-methyl-5-(morpholin-4-carbonyl)-thiophen-2-yl]-5-morpholin-4-yl-benzamide;

5-{3-[5-*tert*-butyl-2-(4-fluoro-phenyl)-2H-pyrazol-3-yl]-ureido}-thiophene-2-carboxylic acid ethyl ester;

1-[5-*tert*-butyl-2-(4-fluorophenyl)-2H-pyrazol-3-yl]-3-[5-(morpholine-4-carbonyl)-thiophen-2-yl]-urea;

5-{3-[5-tert-butyl-2-(4-fluoro-phenyl)-2H-pyrazol-3-yl]-ureido}-3-methyl-4-cyano-thiophene-2-carboxylic acid methyl ester;

3-cyano-5-(4-fluorobenzoylamino)-4-methyl-thiophene-2-carboxylic acid methyl ester;

N-[4-chloro-3-methyl-5-(morpholine-4-carbonyl)-thiophen-2-yl]-4-fluorobenzamide;

N-[4-chloro-3-methyl-5-(4-fluoro-phenylaminocarbonyl)-thiophen-2-yl]-4-fluorobenzamide;

3-chloro-5-(4-fluorobenzoylamino)-4-methyl-thiophene-2-carboxylic acid methyl ester;

1-[5-tert-butyl-2-(4-fluoro-phenyl)-2H-pyrazol-3-yl]-3-[4-chloro-3-methyl-5-(1-methylpiperazine-4-carbonyl)-thiophen-2-yl]-urea;

1-[5-tert-butyl-2-(4-fluoro-phenyl)-2H-pyrazol-3-yl]-3-[4-chloro-3-methyl-5-(4-pyridylmethylaminocarbonyl)-thiophen-2-yl]-urea;

N-[4-chloro-3-methyl-5-(4-pyridylmethylaminocarbonyl)-thiophen-2-yl]-3-fluoro-5-morpholin-4-yl-benzamide;

N-[4-chloro-3-methyl-5-(2,3,5-trimethyl-2H-pyrazol-4-ylaminocarbonyl)-thiophen-2-yl]-3-fluoro-5-morpholin-4-yl-benzamide;

N-[4-chloro-3-methyl-5-(4-fluorophenylaminocarbonyl)-thiophen-2-yl]-3-fluoro-5-morpholin-4-yl-benzamide;

N-[4-chloro-3-methyl-5-(1-methylpiperazin-4-ylaminocarbonyl)-thiophen-2-yl]-3-fluoro-5-morpholin-4-yl-benzamide;

N-[4-chloro-3-methyl-5-(2-amino-pyrimidin-5-ylaminocarbonyl)-thiophen-2-yl]-3-fluoro-5-morpholin-4-yl-benzamide;

1-[2-(tetrahydrofuran-2-yl)-thiadiazol-5-yl]-3-[4-chloro-3-methyl-5-(morpholine-4-carbonyl)-thiophen-2-yl]-urea;

1-[4-chloro-3-methyl-5-(morpholine-4-carbonyl)-thiophen-2-yl]-3-[5-cyclohexyl-[1,3,4]thiadiazol-2-yl]-urea;



1-[4-chloro-3-methyl-5-(morpholine-4-carbonyl)-thiophen-2-yl]-3-(5-morpholin-4-yl-[1,3,4]thiadiazol-2-yl)-urea;  
1-[4-chloro-3-methyl-5-(morpholine-4-carbonyl)-thiophen-2-yl]-3-[5-(4-methyl-piperazin-1-yl)-[1,3,4]thiadiazol-2-yl]-urea; and  
1-[5-tert-Butyl-2-(2,4-difluoro-phenyl)-2H-pyrazol-3-yl]-3-[4-chloro-3-methyl-5-(morpholine-4-carbonyl)-thiophen-2-yl]-urea;  
and salts, solvates and N-oxides thereof.

105. A pharmaceutical composition comprising a compound as defined in claim 83 together with a pharmaceutically acceptable carrier.